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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,854	07/08/2003	Rand Kalani Ray	HYD 012 PA	9149
29673	7590	04/05/2006	EXAMINER	
STEVENS & SHOWALTER LLP 7019 CORPORATE WAY DAYTON, OH 45459-4238			CAVALLARI, DANIEL J	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/614,854

Applicant(s)

RAY, RAND KALANI

Examiner

Daniel J. Cavallari

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,6,8,9,12,14,21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6,8,9,12,14,21 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

### **DETAILED ACTION**

The examiner acknowledges a submission of the amendment filed on 1/17/2006. The amendment to claims 1, 6, 8-9, 12 & 14, cancellation of claims 2-5, 7, 10-11, 13 & 15 and addition of new claims 21-22 are accepted.

The previously made objection to the specification and drawings has been withdrawn.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation of "...to converter either a DC sensor signal, comprising a current sourcing or current sinking output, supplied at said second end of said at least one second sensor lead to an AC sensor signal, comprising a switching

output...". The statement "...to converter either a DC sensor signal..." implies that a second type of sensor signal, besides a DC sensor signal, could also be converted although the claim fails to recite another type of sensor signal making the use of the term "either" unclear.

Furthermore, it is unclear what is meant by converting a "DC sensor signal" to an "AC sensor signal". The use of the terms "AC" and "DC" which stand for "alternating current" and "direct current" implies that some form of power conversion is taking place however the sensor circuitry does not contain any power converting devices. The examiner notes that the specification discloses "...converting a DC sensor output to an AC compatible switching output..." (See Page 4, Specification) however the disclosure of the sensor operation (See Specification, Page 5 to 6) fails to define the terms "AC sensor signal" and "DC sensor signal" or describe how a conversion is performed between the two signals.

The specification discloses that a "opto-isolator triac (62) provides a switching output across lines 26 and 28 whereby the process controller 64 connected to the lines 26, 28 may detect the switching condition of the opto-isolator triac 62 corresponding to a sensor output received on a second sensor lead or line 66." From this description of the opto-isolator operation, a connected processor detects a signal, in the form of current present at the sensor output however, this signal is dependant on "...the sensor signal provided on the sensor line 66 may be in the form of either a current sourcing output or current sinking output to trigger the opto-isolator triac (62)" (See Specification, Page 5). The specification fails to teach the sensor signal comprising either a DC or AC signal

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making it unclear what is meant by the sensor signal conversion to another form of signal.

Because of the 112 problems with claim 1, claims 1, 6, 8, 9, 12, 14, 21, & 22 can not be examined against prior art.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is further rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 6 recites the limitation of "...wherein said sensor converter comprises an opto-isolator triac." It is unclear how an opto-isolator is used to provide conversion between AC and DC signals. The specification discloses "The opto-isolator triac (62) provides a switching output across lines 26 and 28 whereby the process controller 64 connected to the lines 26, 28 may detect the switching condition of the opto-isolator triac 62 corresponding to a sensor output received on a second sensor lead or line 66." From this description of the opto-isolator operation, a connected processor detects a signal, in the form of current present at the sensor output however, this signal is dependant on "...the sensor signal provided on the sensor line 66 may be in the form of

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either a current sourcing output or current sinking output to trigger the opto-isolator triac (62)” (See Specification, Page 5). The specification fails to teach the sensor signal comprising either a DC or AC signal.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Cavallari whose telephone number is (571)272-8541. The examiner can normally be reached on Monday-Friday 8:30-5:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Cavallari

March 21, 2006



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